Supersedes Suppl. Spec. dated 7/29/93 & 3/17/98

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 708 -- PAINTS

White or Yellow Traffic Paint

Amend 1. General to read:

1.1 General. This specification covers ready-mixed 100% acrylic type, low VOC, fast drying, white or yellow waterborne traffic paint that can be used as a base for reflective spheres, or for use as a plain non-reflective paint. The paint shall be suitable for either bituminous or concrete surfaces.

1.2 The paint shall be formulated and processed specifically for service as a binder for reflective spheres, in such a manner as to produce maximum adhesion, refraction, and reflection and a highly weather resistant traffic line. Any capillary action of the paint shall not be such as to cause complete coverage of the spheres.

1.3 The paint shall dry on a road surface to a strongly adherent film that will not turn dark in sunlight or show appreciable discoloration with age. It shall be easily and uniformly applied with mechanical line-marking equipment and shall meet the opacity (contrast ratio) properties specified herein.

Amend 2. Paint to read:

2.1 Paint. Paint shall be 100% acrylic, with or without methanol, rated non-combustible with the composition complying with the following:

White Traffic Paint

Property	Test Method	Requirements
Binder	ASTM D 2621 Infrared Analysis	100 % Acrylic
Polymer Emulsion within Binder	NH DOT C1	Rohm and Haas FT3427 or approved equivalent.
Titanium Dioxide, Rutile Type II	ASTM D 1394	120 g/l (1 lb./gal.) Min.
Pigment, by weight	ASTM D 3723	58% Min. to 62% Max.
Total non-volatile	ASTM D 2697	76% Min. by weight 62% Min. by volume
Total non-volatile in vehicle	ASTM D 2697	42% Min. by weight
Lead	ASTM D 3335	0.06% Max.

VOC	ASTM D 3960	150 g/l (1.25 lb./gal.) Max.
Theoretical Weight	ASTM D 1475	1678 ± 36 g/l (14.0 ± 0.3 lb./gal.)
pH		9.6 Min.
Flash Point (Close Cup)		> 60 °C (140 °F)
Color White	Without spheres a minimum of 24 hours after application	Fed-Std-595B No. 37886

Yellow Traffic Paint

Property	Test Method	Requirements
Binder	ASTM D 2621 Infrared Analysis	100 % Acrylic
Polymer Emulsion within Binder	NH DOT C1	Rohm and Haas FT3427 or approved equivalent. Pigment - Yellow #65 or #75
Titanium Dioxide, Rutile Type II	ASTM D 1394	24 g/l (0.2 lb./gal.) Min.
Pigment, by weight	ASTM D 3723	58% Min. to 62% Max.
Total non-volatile	ASTM D 2697	76% Min. by weight 62% Min. by volume
Total non-volatile in vehicle	ASTM D 2697	42% Min. by weight
Lead	ASTM D 3335	0.06% Max.
VOC	ASTM D 3960	150 g/l (1.25 lb./gal.) Max.
Theoretical Weight	ASTM D 1475	1618 ± 36 g/l (13.5 ± 0.3 lb./gal.)
pH		9.6 Min.
Flash Point (Close Cup)		> 60 °C (140 °F)
Color Yellow	Without spheres a minimum of 24 hours after application	Fed-Std-595B No. 33538

2.2 In addition, all traffic paint shall comply with the following requirements:

Property	Test Method	Requirements
Viscosity (Krebs Units)	ASTM D 562	78 Min. to 95 Max. @ 25 °C (77 °F)
Fineness of Grind (North Standard)	ASTM D 1210	2 Min.
Drying Time	ASTM D 711 with wet film thickness of 15 mils	10 minutes Max. @ 25 °C (77 °F)
Flexibility	FSS TT-P-1952D, Section 4.5.5, using 1/2” mandrel bend	No Cracking or Flaking
Dry Opacity (contrast ratio)	ASTM D 2244	0.96 Min.

Daylight Reflectance	Federal Test Method No. 141c	85% Min. for White Paint 50% Min. for Yellow Paint
Bleeding (ratio)	FSS TT-P-1952D	0.97 Min.
Scrub Resistance	ASTM D 2486	Pass 300 cycles
Freeze-Thaw Stability	FSS TT-P-1952D	$\leq$ 10% change
Heat Stability (Krebs Units)	FSS TT-P-1952D	$\leq$ 10% change

Condition in Container: The paint shall show no livering, skinning, mold growth, putrification, corrosion of the container, or hard settling of the pigment in the container. Any settling shall be readily dispersed when stirred by hand with no persistent foaming.

No Track Time: Paint shall dry to a no tracking condition in no more than 3 minutes, the no tracking condition shall be determined by actual application on the pavement at a wet film thickness of 508 microns (20 mils) with white or yellow paint covered with glass beads at a rate of 960 grams per liter (8 pounds per gallon). The paint lines for this test shall be applied with the striping equipment operated so as to have the paint at temperatures between 20 - 35 °C (70 - 100 °F) at the spray orifice. This maximum tracking time shall not be exceeded when the pavement temperature varies from 10 °C (50 °F) to 50 °C (120 °F), and under humidity conditions of 80% or less providing that the pavement is dry. The no tracking time shall be determined by passing over the paint line 3 minutes after paint application, in a simulated passing maneuver at a constant speed of 48 to 64 kilometers per hour (30 to 40 miles per hour) with a passenger car. A line showing no visual deposition of the paint to the pavement surface when viewed from a distance of approximately 15.3 meters (50 feet) from the point where the test vehicle has crossed the line shall be considered as showing no tracking and conforming to the requirement for field drying conditions. This field dry time test shall be used for production samples only.

Dry Through (Early Washout): A sample of 15 mil wet film thickness paint placed immediately in a humidity chamber maintained at 22.5 °C $\pm$ 0.5 °C (72.5 °F $\pm$ 2.5 °F) and 90% $\pm$ 3% relative humidity shall have a “dry-through” time less than or equal to the specifier’s laboratory reference paint film tested in accordance with ASTM D 1640, except that the pressure exerted will be the minimum needed to maintain contact between the thumb and film.

2.3 Material Safety Data Sheets (OSHA Form 20 or equivalent) pertinent to all materials in this product shall be within the striping vehicle.